

THE EXPLORATION OF BIOENERGY GENERATOR PROCESSING BASED ON THE INFORMATION AND COMMUNICATION TECHNOLOGY

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ABSTRACT

The utilize of the renewable energy sources had become increasingly indispensable, through the last decade. There were a great amount of research regarding technologies of renewable energy. But, commonly conception that quite a few has appeared of these research concerning commercially attractive technologies. This article designed to Scouting the Bioenergy Generator Processing (SBGP) depend on the Information and Communication Technology (ICT) by connecting to Grid under the attributes that the Bioenergy Generator connecting to grid collection needs a comparatively high accuracy and response speed when processing information in actual-time, via linking with the processing attributes of Bioenergy Generator connecting with grid, the processing system designed on network technology with a three stage network construction, each has special tasks. In conformity with each contents of a task, the system stratifies to identical network technology. Moreover, it can support the processing system requirements and make utilize of the following types of characteristic technologies with more effectively: technology of information transmission at actual-time, sensor of distributed technology, identification the information and communication technology (ICT).

Keywords: Internet Technology, Bioenergy Generator, Grid, Ad-HOC Network & Power

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INTRODUCTION

In last years, beside sustained fast amplification of the economy and living style of Iraq and rising cities size, there are extremely of waste and rubbish every day. Nowadays, the waste and rubbish disposal capacity of generality cities cannot confront the practical requirements and needs. There is a great amount of waste and rubbish still not treated dispersed near the living regions that direct effects on the people's life goodness. Waste and rubbish are employed to Bioenergy generator and then the Bioenergy is utilized to produce power to effectively settle this inconsistency [1-3]. Moreover, most of the far areas or remote rural areas are being short of power. The usage of a Bioenergy generator not only alleviate the squeeze on local power energy, but also discount, a huge amount of Waste, rubbish and manure cyclically, which meet recycling and get rid of pollution, decrease emissions, energy provision and saving it, as well as effectively enhances environments of living. A Bioenergy generator is linked to grids in order to carry power for cover wide users via these grids, which encourage the usage of Bioenergy generator linking to the grid. Presently, Bioenergy generator joining to grid started applying in many cities [4]. The demands of the power grid in this aspect are still relatively high. However, when the generator frequency, phase sequence, and voltage phase are harmonious with the system of grids, can the Bioenergy

generator be linked to the grid. The Bioenergy generator capability has a quite small proportion regarding the country's total capacity of generating. The numerous distant rural area's shortage a credible grid combining tools and servicing technology.

Thus, it becomes an unprecedented and modern subject of how to boost and rise Bioenergy generator technology in all rural regions. At this time, the major factors that prevent the establishing of Bioenergy generator technology to most rural regions are the shortage and the absence of a controlling base and Infrastructure together with perfect real-time and stabilization, efficient dispatching and administration technology. Under the previous difficulties which mentioned above, this article offers internet technology (IT), which is employed to institute a system of intelligent controlling to observe and dispatch the linking process to the grid. The remnant of this article will offer a model of intelligent controlling [5-7].

CONNECTING THE CONTROLLING SYSTEM OF GRID WITH BIOENERGY GENERATOR

A connecting the controlling system of Grid with Bioenergy generator has involved the production of biogas and collection, Bioenergy refinement and then storage, while Bioenergy generator linking into grid [11]. The aggregate control-system observes essential and necessary data. The control-system procedure is shown in Fig.1. The control-system work based on the Bioenergy generator linking to grid and observes the necessary factors of each operation. Some factors require the procedure to be followed in real-time, thus if not in the ordinary operating domain, they require to process appropriately. So Fig. 2 explains the construction of Bioenergy generator linking to control-system of grid. After gathering the data from the speck and treatment, it transfers them to the database center. The database center addresses the combined data to information data and platform of control based on real or non real-time data. If the data are normal, then it is connected to the grid. Otherwise, it gives the order to the execution department to process the abnormal data according to the source. If the information measure is normal, subsequently it's linked to the grid. Otherwise, it offers the order to the execution part to operate the anomalous data based on exporter.

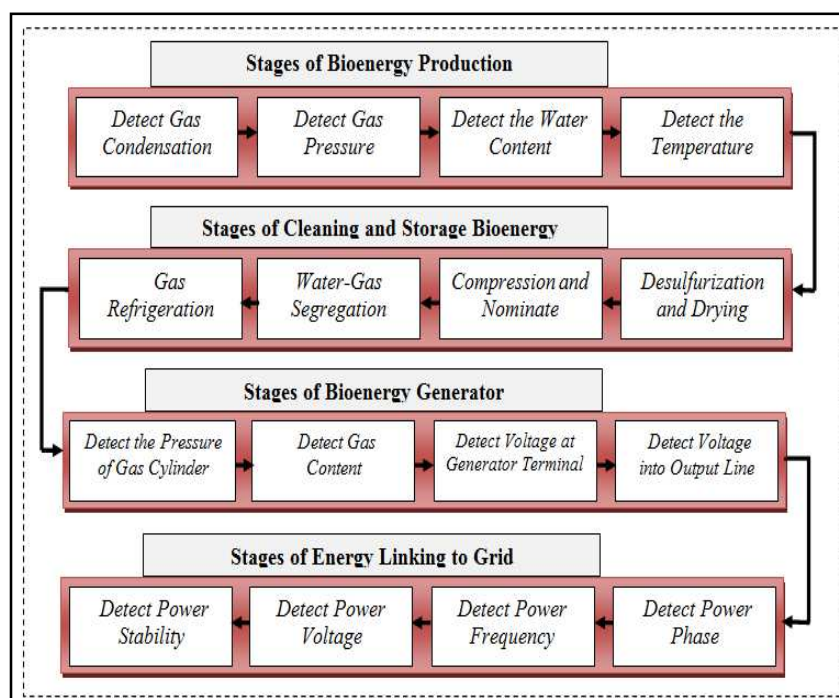


Figure 1: Procedure and Linking Bioenergy Generator with Grid

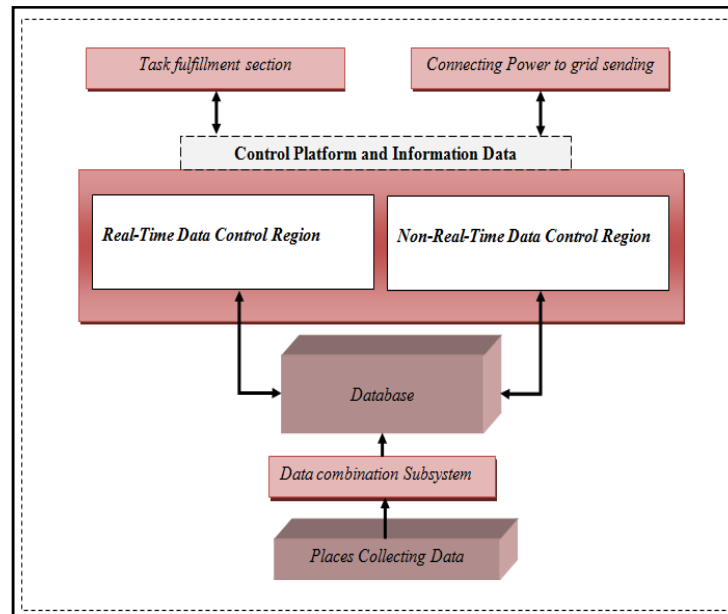


Figure 2: Bioenergy Generator Structure Linking With System of Grid Controlling

STRUCTURE OF THE INTERNET NETWORK SYSTEM

The Conception of Internet Equipment

First one presented the conception of internet (web) was by Massachusetts Institute of Technology [8]. It knows that the network of the internet is an RFID system. All the equipment is connected with the internet out of an information sensing system, like radio frequency, consistency to recognize intelligent correspondence and management. As of late, with the advancement of the utilization of the internet, the meaning of the web has changed enormously. Numerous researchers of our nation feel that the web can be separated into a wide definition and a limited definition as per the viability of common sense application. The web, in the limited definition, is the system that interfaces one thing to another to acknowledge wise recognizable proof and administration of things. The web, in the expansive definition, can be viewed as a coordinated data and physical space. It makes the computerized organizing acknowledge data trade viably amongst things and people, people and reality condition [9]. So the web is really a sort of system in light of a recognition, organize, of which the capacity outperforms media transmission arrange. It has extraordinary change on the elements of getting data, data transmission, data preparing et cetera.

Equipment of Network Internet Installation and Controlling

The system structure of the internet as a rule applies for three-level system structure. They are the observation layer, organize layer and application layer. The observation layer settles the issue of getting data in the physical condition; the system transmission layer needs to determine the transmission issue of the information and the application layer needs to determine the data acknowledgment handling and human-PC communication issue [10, 11]. By joining the physical foundation of Bioenergy Generator associating with lattice, a sort of web demonstrates with a three-level structure can be set up as follows in Fig. 3. The primary layer gathers the data of checking parameter in each procedure of the Bioenergy Generator interfacing with framework through all methods for observing and sensors. Meanwhile, it sets up the physical layer, information connect layer and discernment layer arrange acknowledging implies. The second layer fundamentally transmits the information associated by the recognition layer. This information contains constant and non real-time

information observed in the Bioenergy Generator process. Also, system and information perusing of upper and lower layer require convention ascension. And furthermore concrete systems administration technology completes in this layer. At that point the application layer is for the most part in charge of data, preparing and ID technology of a web of Bioenergy Generator associating with the framework. Distinguishing proof technology can make utilization of RFID recognizable proof technology or two-dimensional code. Convention transformation can apply for Ipv6. Concerning organizing technology, remote systems, portable system, Ad-hoc arrange technology, and autonomic figuring and systems administration technology are connected to it.

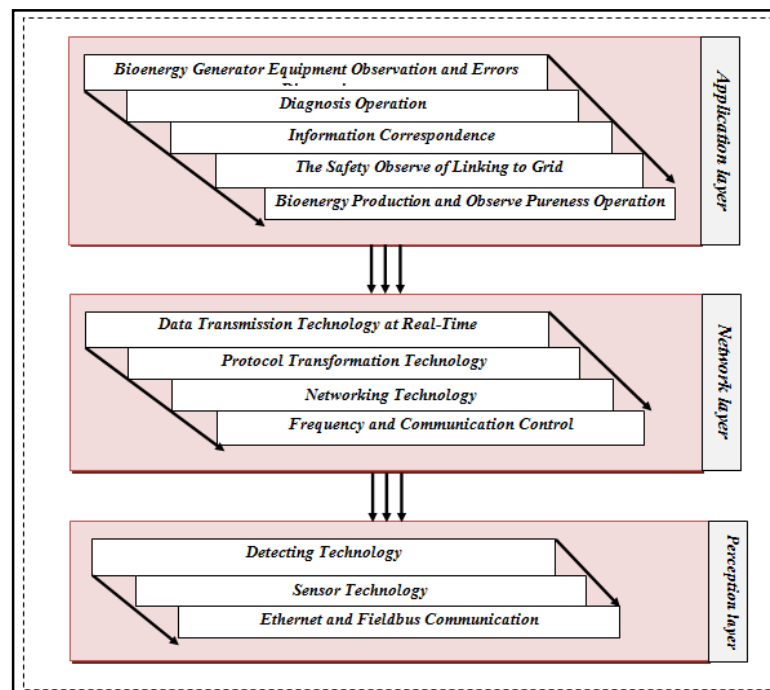


Figure 3: Linking Grid with Equipment Network Layers of Bioenergy Generator

INTERNET EQUIPMENT AND IDEALISTIC TECHNOLOGY OF BIOENERGY GENERATOR LINKING TO GRID

By linking the current developmental run of the idealistic internet technology, this article outlined a controlling model structure in view of Bioenergy Generator in the wake of planning a systematic structure of Bioenergy Generator internet technology. That structure is as per the following in Fig. 4. The task procedure is as per the following: a sensor gathers the flag and after that information are conveyed to the remote impromptu system through a remote sensor arrange. At that point the information are sent to the following system by optical fiber link and afterward conveyed to the following system data controlling and overseeing stage. The stage figures and conclusions the blame as indicated by information. At that point it conveys the blame handling requests to execution office through mechanical Ethernet. It can be found in Fig. 4 that the sensor and remote sensor organize make up the recognition layer; the remote specially appointed system and optical fiber link make up the system layer. The following system, mechanical Ethernet and data, overseeing and controlling stage make up the application layer. There are four sorts of run of the idealistic technology in the model, circulated sensor technology, ongoing information transmission technology, correspondence technology and data distinguishing proof technology. Disseminated sensor technology can apply for the canny sensor to interface with the impromptu system, or with field bus. Remote sensor technology is a sort of significantly enhanced technology in sensor

advances that can supplant the previous; continuous information transmission technology, aside from having utilized remote Ad-hoc arrange technology, can make utilization of radio technology to associate with Ad-hoc organize. Be that as it may, thinking about the cons and pros, the constant of the remote specially appointed system technology is vastly improved. Data recognizable proof technology can apply to RFID distinguishing proof technology [12]. Due to significantly littler obstruction of the Bioenergy Generator delivering conditions, contrasting and fire and water control, it is reasonable for remote correspondence technology. It is important to enhance the rightness of the transmission of constant information in the application.

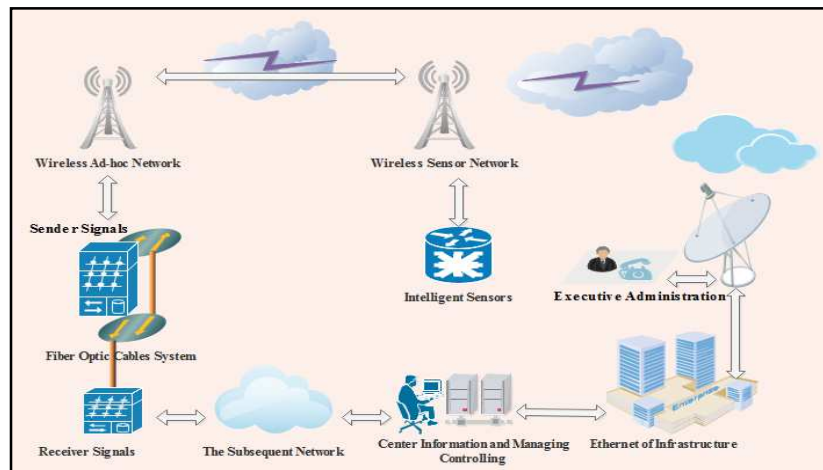


Figure 4: Internet Equipment Structure of Bioenergy Generator Linking to the Grid

CONCLUSIONS

Bioenergy Generator interfacing with framework has high necessities on the controlling framework. Specifically, handling continuous information needs high reaction speed and exactness. In the wake of dissecting the handling qualities of the Bioenergy Generator, this paper composed a sort of controlling model by joining it with the web. The model is connected in a three-level system structure with extraordinary errands for each layer. In agreement with each errand content, the model is connected to relating system technology. In principle, it makes powerful utilization of the accompanying four runs of the ideal technologies: divided sensor technologies, real-time information sending technologies, correspondence technologies furthermore, data recognizable proof technologies.

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